

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A random copolymer comprising:

a) at least one vinyl aromatic monomer ~~at a strength~~ in an amount ranging from 75 to 95% by weight of the copolymer, wherein the vinyl aromatic monomer is selected from the group consisting of styrene,  $\alpha$ -methyl styrene, p-methyl styrene, ter-butyl styrene, 2,4 di-methyl styrene monomers and the bromated or chlorinated derivatives thereof;

b) at least one alkyl methacrylate monomer ~~at a strength~~ in an amount of up to 15% by weight of the copolymer, wherein the alkyl moiety has from 1 to 4 carbon atoms; the alkyl methacrylate monomer being selected from the group consisting of methyl, ethyl and butyl methacrylate monomers; and,

c) at least one alkyl acrylate monomer ~~at a strength~~ in an amount of up to 25% by weight of the copolymer, wherein the alkyl moiety has from 1 to 4 carbon atoms; the alkyl acrylate monomer being selected from the group consisting of methyl, ethyl, and butyl acrylate monomers

wherein the random copolymer has an average molecular weight by number ( $M_n$ ) from 70,000 to 140,000; an average molecular weight ( $M_w$ ) from 140,000 to 270,000; a polydispersity from 2.0 to 2.8; and a melt flow index from 2 to 20 g/10 min; the random copolymer being obtained by the polymerization of components a) to c) in a continuous agitating reactor followed by a tubular reactor; the agitating reactor operating at a temperature of about 120° and a residence time of about 2 hours; while the tubular reactor operates at an outlet temperature of about 160° and a residence time of about 1 hour.

2. (Previously Presented) The random copolymer according to claim 1 comprising from 83 to 95% by weight of at least one vinyl aromatic monomer.

3. (Previously Presented) The random copolymer according to claim 1 comprising up to 10% by weight of at least one alkyl acrylate monomer.

4. (Previously Presented) The random copolymer according to claim 1 comprising up to 7% by weight of at least one alkyl acrylate monomer.

Claim 5. (Cancelled)

6. (Previously Presented) The random copolymer according to claim 1, wherein the vinyl aromatic monomer is styrene.

Claim 7. (Cancelled)

8. (Previously Presented) The random copolymer according to claim 1, wherein the alkyl methacrylate monomer is methyl methacrylate.

Claim 9. (Cancelled)

10. (Previously Presented) The random copolymer according to claim 1, wherein the alkyl acrylate monomer is butyl acrylate.

11. (Previously Presented) The random copolymer according to claim 1 comprising: from 87% to 95% by weight of styrene; from 5% to 10% by weight of methyl methacrylate; and up to 3% by weight of butyl acrylate.

Claim 12. (Cancelled)

13. (Currently amended) A polymer mixture for manufacturing extruded products, the polymer mixture comprising:

~~(a)~~ (i) from 1 to 75% by weight of the random copolymer as claimed in claim 1; and,

~~(b)~~ (ii) from 25 to 99% by weight of at least a diblock or triblock copolymer containing styrene monomers or mixtures thereof;  
the polymer mixture being obtained by coextrusion of i) and ii) and having morphology of vast domains in the shape of layers.

14. (Previously Presented) The polymer mixture according to claim 13, wherein the diblock copolymer is selected from the group consisting of styrene-butadiene, styrene-isoprene copolymers and the partially hydrogenated derivatives thereof.

15. (Original) The polymer mixture according to claim 14, wherein the diblock copolymer is styrene-butadiene containing from 15 to 35% by weight of butadiene.

16. (Previously Presented) The polymer mixture according to claim 13, wherein the triblock copolymer is selected from the group consisting of styrene-butadiene-styrene, styrene-isoprene-styrene copolymers and the partially hydrogenated derivatives thereof.

17. (Previously Presented) The polymer mixture according to claim 13, wherein the diblock or triblock copolymer and the mixtures thereof should have a minimal

average molecular weight by number (Mn) of 70,000 and a minimal average molecular weight by weight (Mw) of 120,000.

Claim 18. (Cancelled)

19. (Previously Presented) An extruded product produced from the polymer mixture of claim 13.

20. (Previously Presented) An extruded product according to claim 19, wherein the product is a thermoformable film, plate or sheet.

21. (Previously Presented) An extruded product according to claim 20, wherein the thermoformable product is transformed to a blister package.